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Communication Tools for Reducing Language Barriers Between Primary School Teachers and Immigrant Parents: A Case Study in Turkiye from Teachers' Perspectives

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Abstract: Previous studies found that Syrian immigrant parents and Turkish primary school teachers struggle to maintain effective communication due to language barriers. This situation has negatively affected Syrian students and the cohesion within the local community. This paper discusses primary school teachers' viewpoints and examines existing solutions that might help reduce these barriers. Interviews and card-sorting activities designed based on Human-Centred Design principles were carried out with nine Turkish primary school teachers. The results suggested the current communication has been one-way (from teachers to parents). There is a need to make it two ways and help both parties develop better understanding of each other. Hence, the researcher would like proposes that school management team should bring parents to school more often through appropriate social events. Besides this, parent-teacher communication needs to be supported by an interpreter and WhatsApp. Further investigation will be carried out with parents to gain their points of view.

Keywords: Language barriers, Immigrant parent-teacher communication, Human-Centred Design

1. Introduction

Currently, there are over 3 million Syrians living in Türkiye (Ministry of Interior Directorate of Migration Department, 2022). In 2013 alone, a large number of Syrians migrated to Türkiye as war refugees (Alpak et al., 2015). For such immigrant groups, survival is the main concern, which might leave learning the local language (Turkish) or focusing on their children's education at a level of lower priority (Koç et al., 2015; Sevinç et al., 2016; Taşkın and Erdemli, 2018; Akar and Erdoğan, 2019). Reports on the Turkish context show that Syrian parents and local teachers are unable to communicate due to the language barriers (Tumkaya and Copur, 2020), which has a negative impact on immigrant students' achievement and cohesion of the local community in the long term (Driessen et al., 2005; Tumkaya et al., 2021). In addition to language barriers, there are also other factors affecting parent-teacher communication; these parents experience social and cultural adaptation problems in the host country (Taşkın and Erdemli, 2018). As a result, the researcher aims to understand teachers' opinions from the Human-Centred Design perspective and propose guidelines to school management teams. This paper primarily discusses the results of the doctoral study and focuses on key requirements from teachers. These findings will be combined with the needs of parents to create guidelines for school management teams. The guidelines could potentially help reduce language barriers while assisting in the development of an understanding and empathy between both parties.

Human-Centred Design (HCD) principles have shown to be the most suitable to underpin such projects as it centres on humans and their needs and captures their feelings (Giacomin, 2014) as this project focuses on humans' problems and reasons behind the issues. HCD processes begin with the 'empathizing' phase, which is defined as 'the capacity to step into other people's shoes, to understand their lives, and start to solve problems from their perspectives' by IDEO (2015). In this case, there is a need to understand how stakeholders feel and think, what they do, and how. HCD project are expected to enable an in-depth understanding of their attitudes and the reasons behind them in order to generate feasible solutions.

Examining the literature, there are a number of examples based on HCD which focus on humans' recurring problems. For instance, a new app for healthcare services was developed to overcome language barriers between paramedics and refugees in Australia (Rebecca Bartlett, 2021). Different stakeholders (refugees, healthcare staff who engage with refugees, and people from refugee associations) were interviewed to understand the problems from different perspectives. At the stage of Ideation, a solution was generated based on the insights gained during these empathy sessions. Finally, an actual app was offered to the refugees to help with their healthcare experiences.

This paper intends to adapt HCD principles in order to firstly evaluate current solutions and secondly to gain a deeper understanding of the challenges in the Turkish context by focusing on the challenges and barriers encountered by primary teachers, while examining existing solutions that might be suitable. In the future, further research should be developed looking at the parents' perspective to collect a holistic set of data (see Section 7).

2. Evaluating current solutions to help tackle language barriers

According to the market review, existing solutions which help reduce language barriers can be broadly categorised into four groups: 1) interpreter services, 2) video remote interpreting (VRI), 3) mobile applications (for instance, WhatsApp), and 4) pictorial booklets.

2.1 Interpreter services

Interpreting services are those where a professional interpreter converts spoken words from one language to another simultaneously (Wadensjo, 2014). These services are often used in various contexts where language problems might exist and where there are financial resources to do so, such as in courts, international business meetings, and hospitals (Angelelli, 2008; Crezee and Jülich, 2020). These services are usually expensive and, in many contexts, where these services are used, there are rules or guidelines to manage their use effectively. For instance, a guideline is offered to health staff in America to use the time for the service effectively (Squires, 2018). The health staff are requested to do a number of things during the conversations such as deliver concise information about the patient, the patient's diagnosis, and treatment to the interpreter. During the conversation, they are advised to do the following: to use shorter statements, not to cut off the interpreter, to be aware of and try to recognize differences in the statements of the patient due to cultural barriers, to ensure patient satisfaction, etc. It is also recommended that a brief conversation with the interpreter takes place at the end of the interaction (ibid). In the case of large health institutions, the financial burden of these services can be relatively manageable (L.A. Care Health Plan, 2018).

2.2 Video remote interpreting

Video remote interpreting (VRI) is a video telecommunication service that utilizes devices such as web cameras or videophones to offer sign language or spoken language interpreting services (see Figure 1). This is done through a remote interpreter to communicate with people with whom there is a communication barrier (Moser-Mercer, 2011). The VRI is usually used where face-to-face interpretation services are limited. Besides this, both these facilities have similar systems-see the examples in Figure 1 for use of the system in hospitals.

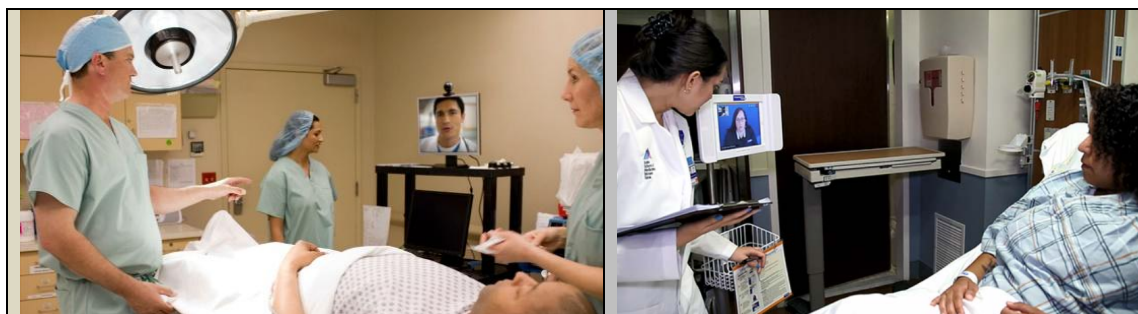


Figure 2. Video-Interpreting systems in hospitals (URL 1 and URL 2).

Overall, the VRI system is typically useful where in-person meetings are not feasible for financial or accessibility reasons. Individuals can remotely and simultaneously communicate with each other through interpreters (Kletecka-Pulker et al., 2021). Hence, institutions are advised to offer VRI for situations where people are unable to attend occasions physically (Alley, 2012; Jacobs et al., 2018).

2.3 Apps

A mobile application or app is a software application designed to run on a mobile device such as a phone or tablet (Liao and Ho, 2021). Apps are developed to overcome language-based communication problems and can be downloaded onto personal devices on Apple Store and Google Play Store such as Speak & Translate and I-Translate (see Figure 2). These types of apps are typically used in various situations where language problems occur.

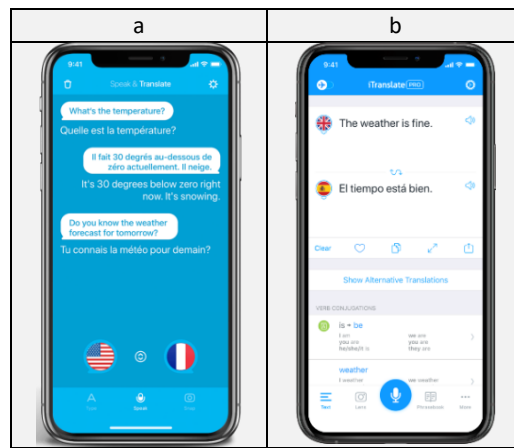


Figure 3. A screenshots from *Speak & Translate* (a) and *I-Translate* (b) (Available at Play store / date: 07.11.2022)

There are some groups of apps designed for specific situations such as where language problems exist. For example, an app was developed for immigrants to help them in a hospital (Noack et al., 2021) – see Figure 3. The app supports languages with 600 common phrases used in healthcare services. The most required features are included in the software: 'Audio Playback and Additional Text Display', 'Log to Document Patient Responses', 'Quick Access Menu', and 'Navigation'.

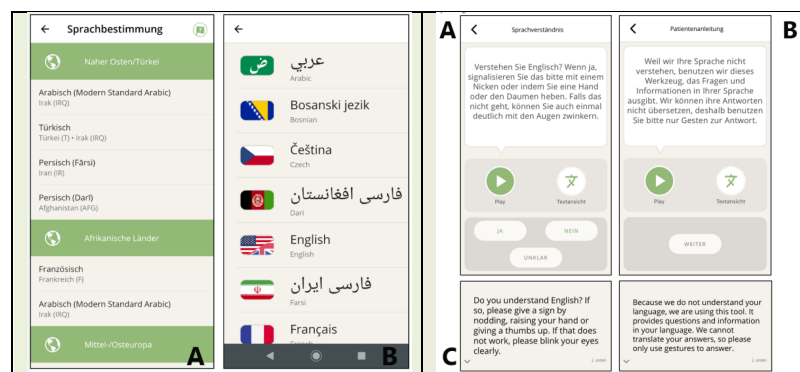


Figure 4. Screenshots from the app (Noack et al., 2021)

Overall, translation programs can be apps which offer translation and can be used in different areas where language problems occur. For example, such programs can be effective for tourists who need translation of words or sentences (Kilichan and Yilmaz, 2020). On the other hand, authorities often need more specific apps to ensure effective communication between parties who speak different languages (Ross and Gao, 2016). Apps are frequently used due to their financial profits. Individuals communicate with others simultaneously and overcome language problems without a requirement for any other person. Therefore, apps are often recommended as an alternative solution for language limitations (Chang et al., 2014; Panayiotou et al., 2019; Müller et al., 2021).

2.4 Pictorial Booklets

A pictorial booklet is a very thin book with a small number of pages and a paper cover, conveying information via texts and illustrations regarding a topic (Talhouk et al., 2016). It is also known as a 'toolkit' (Badraddin and Arif, 2017). Global companies (for example, IKEA) often use pictorial booklets to help installation of their products. Some pictorial booklets are designed to reduce language barriers between people (Badraddin and Arif, 2017). Such booklets usually cover often-used statements in different languages (see Figure 5). Furthermore, they usually include additional information which can help authorities to communicate effectively with different parties (for example, the effects of cultural differences on communication).

Common Signs in Multiple Languages									
You may use this tool as much as you want in your office to help your Limited English Proficient (LEP) patients. It is suggested that you laminate each sign and post it.									
English	Welcome	English	Enter	English	English	Khmer / ខ្មែរ	Korean / 한국어	English	English
Arabic:	أهلاً وسهلاً	Arabic:	دخول	Arabic:	دخول	ចូលចូល	환영합니다	환영합니다	환영합니다
American Chinese	歡迎光臨	American Chinese	入口	American Chinese	入口	ចូលចូល			
Farsi	خوش آمد	Farsi	دخول	Farsi	دخول				
Khmer	ស្វាគមន៍	Khmer	ចូល	Khmer	ចូល				
Russian	добро пожаловать	Russian	вход	Russian	вход				
Spanish	Bienvenidos	Spanish	Entrada	Spanish	Entrada				
Tagalog	Chika moy kayo	Tagalog	Pasukan	Tagalog	Pasukan				
Vietnamese		Vietnamese	Đi vào	Vietnamese	Đi vào				
English	Registration	English	Exit	English	English	Khmer / ខ្មែរ	Korean / 한국어	English	English
Arabic:	التسجيل	Arabic:	خروج	Arabic:	خروج	ចេញចេញ	출구	출구	출구
American Chinese	報名到	American Chinese	出口	American Chinese	出口	ចេញចេញ			
Farsi	ثبتنام	Farsi	خروج	Farsi	خروج				
Khmer	ចុះឈ្មោះ	Khmer	(出口)	Khmer	(出口)				
Russian	регистрация	Russian	Выход	Russian	Выход				
Spanish	Inscripción	Spanish	Salida	Spanish	Salida				
Tagalog	Pagpaparehistro	Tagalog	Lahatan	Tagalog	Lahatan				
Vietnamese		Vietnamese	Đi ra	Vietnamese	Đi ra				
English	Cashier	English	Restroom	English	English	Khmer / ខ្មែរ	Korean / 한국어	English	English
Arabic:	المكتب	Arabic:	حمام	Arabic:	حمام	កម្មាធិការ	현금	현금	현금
American Chinese	收銀處	American Chinese	洗手間	American Chinese	洗手間	កម្មាធិការ			
Farsi	مسئول	Farsi	استحمام	Farsi	استحمام				
Khmer	ទូទាញ	Khmer	ប្រអប់	Khmer	ប្រអប់				
Russian	кашмир	Russian	туалет	Russian	туалет				
Spanish	Caixac	Russian	Tyaset	Russian	Tyaset				
Tagalog	Cashier	Tagalog	Paikuran	Tagalog	Paikuran				
Vietnamese	The ngân	Vietnamese	Phòng vệ sinh	Vietnamese	Phòng vệ sinh				

Figure 6. Example pages from L.A. Care Health Plan (2018) - common signs in multiple languages.

Pictorial booklets have been proposed as supportive solutions for language limitations (Badrudin and Arif, 2017; Verma and Kataria, 2021). Individuals can carry the booklets and use them a number of times. The use of pictorial booklets does not require an equipment or external person; people who speak different languages can directly communicate with each other via the tools. Conversely, the booklets provide quite limited communication which may not be adequate for effective communication (see L.A. Care Health Plan, 2018 as an example). In this situation, they are acknowledged as a supportive mode for language barriers as long as they are not the fundamental solution.

3. Understanding the language barriers within the Turkish context: data collection and data analysis

In this section, details about the data collection and data analysis for this study will be explained. The study shown here was carried out at a primary school based in the city of Istanbul, in Türkiye. This section will explain how the school was selected as well as the ethical considerations and sampling strategy adopted, along with a description of the criteria used to select participants. After that, the design of research instruments (namely interview and card-sorting) will be discussed. Finally, the data analysis process will be explained.

3.1 Selection of the school

The study was carried out in a Turkish primary school in Istanbul, which is a city with the highest population in Türkiye as well as the most cosmopolitan (TUIK, 2022). The school chosen for this research is among the Turkish schools with the highest number of immigrant students (see the placement of the school in the map in Figure 6).

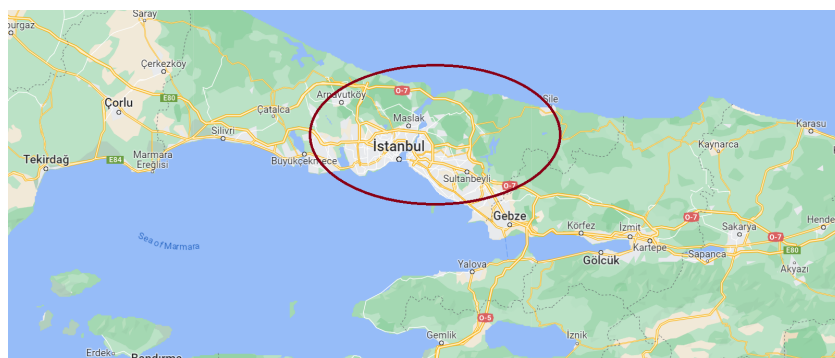


Figure 7. Placement of the school

3.3 Sampling strategy

A stakeholder analysis was applied in this research. According to the analysis, Turkish teachers are one of the groups who have directly been affected by the problem. In this case, nine Turkish primary school teachers who are a mixed group between 1st and 4th level were involved in this project (see inclusion & exclusion criteria for the teachers in Table 1). The rationale behind selecting the mixed group is learning about the problems from various stages.

Table 1. Inclusion and exclusion criteria for the Turkish primary school teachers.

Inclusion criteria	Exclusion criteria
They have/had Syrian immigrant students in their classrooms for at least 1 education term.	Turkish primary school teachers who never had immigrant students before.
They are mixed groups between 1st and 4th level.	
They are both genders (females and males)	

3.4 Data collection

Semi-structured interviews and card-sorting activities were carried out. Interviews were helpful to gain information from teachers separately. In this case, to ensure the teachers were not influenced by each other, teachers would not be affected by each other, and their opinions were disclosed independently. The interviews were recorded and kept in a secure file.

Generation of the research questions: The Human-Centred Design principles underpin the methodology (see the Introduction). In the first stage, Inspiration, the researcher tried to understand the current situation. In this case, the teachers were asked about the general attitude and participation of the immigrant parents and the often-used communication channels with them (see Q1 and Q2). Following this, they asked about the effectiveness of the channels (Q3). Regarding the Ideation phase, the stakeholders were asked about potential communication tools which could help better communication (Q4-Q5). In the last stage of HCD (implementation), the teachers were asked to sort the cards to define the most useful solutions.

The card sorting method offered a chance to systematically define how the teachers prioritise their communication preferences and reasons for them. The cards cover the four types of practical solutions: apps, interpreter services, WhatsApp, and pictorial booklets- see Figure 7. In the literature, interpreter services, VRI, apps, and pictorial booklets are defined as the existing practical solution-see Section 2. However, the cards were adapted to the requirements of this group. Interpreter services and VRI are intertwined, which means VRI can be used where in-person meetings are usually not possible. Although WhatsApp is one of the current ways in which participants already communicate frequently, a separate card was generated for it. Following this, parents were shown a specifically designed app based on immigrant parent-teacher communication (see Section 2.3). For the last card, the option of pictorial booklets was shown. Finally, the teachers were asked to give a reason for these choices, which was helpful in terms of having an in-depth understanding of the reasons.

Table 2. Interview questions for Turkish primary school teachers.

Key issues	Questions
General information about immigrant parent-teacher communication	Q1. How would you describe communication with immigrant parents?
Communication channels	Q2. How do you communicate with immigrant parents? (on the phone, face to face, on WhatsApp, etc) Q3. Do you have problems with communication channels you prefer? If so, why?
Follow up	Q4. Would you like to have solutions which offer different communication channels between immigrant parents and Turkish primary school teachers?

Asking for recommendations

Q5. If designers aim to develop a communication channel, for immigrant parents and Turkish teachers, what kind of communication channels do you recommend? Why?

Q6. Card sorting (the teachers were asked to sort the cards and explain the reasons-see Figure 7)

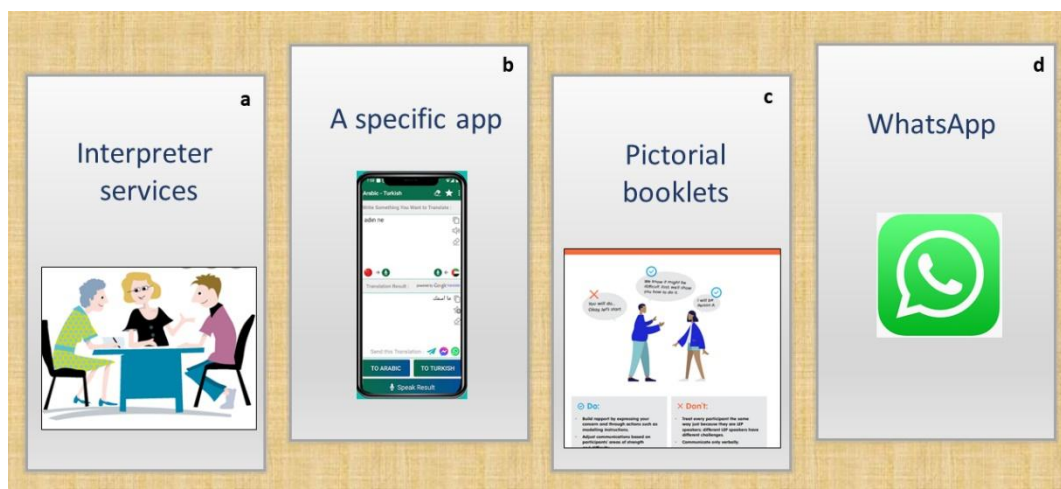


Figure 8. The application of the card sorting method in this study.

3.4 Data analysis

Firstly, the recordings were transcribed and documented separately for each participant. Qualitative analysis was applied to analyse the primary data (see fundamental information for the participants in Table 3).

Table 3. Information for the teachers and classrooms.

Teachers	Gender (Female/Male)	Classroom level (Levels between 1-4)	Number of Syrian students	Number of total students
T1	F	4	4	26
T2	F		2	24
T3	M	1	4	31
T4	F	2	2	21
T5	F	4	6	28
T6	F	2	2	26
T7	M	3	(He used to have Syrian students before)	24
T8	F	3	3	25
T9	F	1	2	25

4. Key Findings & Discussions

The teachers informed that they are required to arrange one meeting with parents at the beginning of each semester according to the regulations of the Turkish Ministry of National Education. In this initial introductory meeting, teachers share general information to the parents such as school guidelines and the annual curriculum plan. Apart from this, teachers also arrange individual meetings with parents, which is at the discretion of the teacher.

In this school, most of the teachers meet parents individually as parents are encouraged to contact them when needed. They commonly indicated that the involvement of parents in their children's education has a significant effect on their success or failure. In cases where parents are not a part of the children's education, the students usually tend to be unsuccessful, taking them longer to learn

writing and reading in Turkish. In this school, most of the Syrian students are behind in their classes; not being able to undertake basic mathematics or read and write in Turkish.

From the teachers' viewpoints, the communication has been one-sided. The teachers reported that they made significant efforts to communicate with parents, but rarely received feedback from them, therefore, there is a need to make communication two-way to develop a better understanding between both parties. As teachers would like parents to understand the school's expectations and be more actively involved in their children's education, there should be opportunities for parents to be more actively involved. In this way, they could develop empathy for teachers and vice versa.

Regarding parent-teacher communication, teachers found certain communication channels more effective than others. Currently, they communicate with all parents (including immigrant parents) via WhatsApp and arrange meetings in person. Each classroom has its own WhatsApp groups where parents and a teacher are involved. In these groups, teachers share information whereas parents are usually not allowed to send texts. These groups are often used by teachers to deliver the required information to parents (for example, homework, sent papers to be signed, and information about events and activities). This allows all parents to have updated information about their children's education in one go.

Immigrant parents tend to use WhatsApp and meet in person with teachers. The texts are sent in Turkish, which requires immigrant parents to use Google Translate to convert the texts to Arabic. Alternatively, children are asked to read the texts to inform their parents. In cases where parents need to ask further questions, parents text teachers individually by themselves using Google Translate to convert the scripts or with the help of their children, to have a chance to dialogue with them. Having been invited immigrant parents to the school by teachers, they usually bring an older child, a relative, or a Turkish neighbour with them to mediate translation. In this case, the teachers are not comfortable with the involvement of an external person in parent-teacher dialogue as those people often mistranslate and teachers are not comfortable with the dissemination of private problems of the students. There is a member of interpreter staff in this school, however, most parents and teachers are unaware of the availability of the service. Therefore, there is a need to reconsider the communication channels.

To determine the most effective communication channels, teachers were asked to sort the cards (see Figure 8 for the cards: a-interpreter services, b-a specific app, c-pictorial booklets, d-WhatsApp) and indicate the most effective ways of communication which could help parent-teacher communication (see Table 1). Most of them designated interpreter services as a first choice (one of the teachers, T1, only indicated interpreter services as a useful solution; she did need to sort the cards). This is because they want immigrant parents to be involved in their children's education; hence, inviting them to school could be useful to encourage their participation in their children's learning period. The teachers believe that attending in-person meetings at schools can be helpful to adapt to the local culture as well as the local education system. Besides this, some teachers were in consensus on the use of WhatsApp continuously. This was because the tool is beneficial to deliver information to the whole parents, especially in the early stages of primary school since there is a large number of papers sent to parents to be signed in the first year. Although the idea of developing a new app was also supported in general, there was doubt about the ability to use such software by the parents. It was commonly thought that such programs could seem too complicated to the parents, and they may not handle them. Most of the teachers were in doubt as to whether the solution is useful for this group due to low levels of literacy within the Syrian immigrant population in Türkiye. Moreover, the teachers are unsure as to whether the parents spend enough time studying.

Table 1. Table layout. Captions for Tables are placed above.

Teachers	First priority	Second priority	Third priority	Last priority
T1	Interpreter services	-	-	-

T2	Interpreter services	WhatsApp	App	Pictorial booklets
T3	Interpreter services	Pictorial booklets	Apps	WhatsApp
T4	Interpreter services	Apps	Pictorial booklets	WhatsApp
T5	-	-	-	-
T6	Interpreter services	App	WhatsApp	Pictorial booklets
T7	Interpreter service (only)	-	-	-
T8	Interpreter services	Apps	Pictorial booklets	WhatsApp
T9	Interpreter services	App	Pictorial booklets	WhatsApp

Regarding the improving communication between teachers and parents, immigrant parents and local teachers need to be accompanied by an interpreter where possible as in-person meetings ensure using body language (including facial mimics) can contribute to verbal communication as well as develop empathy towards each other so immigrant parents can more easily adapt to the local education system. In this case, the interpreter needs to be familiar with the educational processes, and cultures of both parties. The school management team should be able to take action on the effective use of services. For example, parents and teachers should be informed about the availability of the staff (for example, work hours), and the staff can be requested to offer a report to school management about the meetings which can encourage them to work more effectively. Besides this, a booking system should be put in place which will help to avoid conflicts and can help raise awareness of the importance of parental involvement. Moreover, alternative channels, such as WhatsApp, can be suggested to support parent-teacher communication as apps may give people flexibility so parents can have a chance to think about the responses before answering without time pressure. In addition to focusing on communication channels, authorities also should be urged to take further actions for this situation.

5. Key requirements for the guideline development

From the teachers' point of view, the current communication appears to be one-sided because they have made significant efforts to reach out to parents. However, they rarely receive any reply/feedback. Consequently, there is a need to make it a two-way communication. Thus, focusing purely on communication channels may not help solve the problems. There is also a requirement for further actions to help both parties develop empathy for each other. Following this, there are two aspects that have to be addressed: 1) emotional/psychological sides (developing understanding and empathy) and 2) practical sides (using appropriate communication tools).

Regarding interventions which can help both parties develop empathy towards each other, the researcher advises the school management to organise social events/activities accompanied by an interpreter to bring parents closer to teachers. Spending more time at school/with teachers could help parents adapt themselves to the Turkish education system and have a better understanding of school expectations. In this way, they can play a more active role in their children's learning.

With regard to practical interventions to help reduce language barriers, immigrant parents and local teachers should be accompanied by an interpreter familiar with the educational processes and cultures of both parties, which can help reduce language barriers as well as develop empathy between teachers and parents. The school management team should be able to act on the effective use of the service. Besides this, other supportive communication tools, such as WhatsApp should also

be suggested to parents and teachers to help reduce language barriers and convey information quickly when an interpreter service is not available (see Section 4).

To design the overall guideline, further information is needed from parents' perspectives (see Section 7). An HCD approach can help create the overall guideline in terms of developing empathy for both parties (see the introduction). In addition, some other design principles, such as Information Design, also can help design the tool as it helps convey information to different groups clearly (Mijksenaar, 1997; Petterson, 2002; Black et al., 2017)

6. Conclusion

This researcher aimed to suggest a guideline to school management teams that offers an overview of language barriers from both parties: immigrant parents and Turkish primary school teachers. In this way, each group can develop understanding and empathy towards the other. This paper mainly focused on the teachers' perspectives, and therefore, it examines existing solutions from the teachers' point of view. The teachers commonly stated that there is only one-direction communication from teachers to parents, which may be associated with social and cultural differences in addition to language issues. Hence, it is recommended that immigrant parents are should attend meetings in-person, which can help them adapt to the local culture as well as the Turkish education system and encourage them to be more involved in their children's learning needs. Therefore, interpreter services are indicated as the most effective way to reduce these barriers followed by WhatsApp groups which were indicated as a supportive solution. These groups often help deliver information to parents in one go as there are a large number of papers sent to parents to be signed especially in the early stages of primary school education. Although the idea of a specified app was agreed on by Turkish teachers in general, it was commonly thought that such software could seem too complex to the parents, and they may not handle it so they prefer WhatsApp. Furthermore, the idea of a pictorial booklet was not found advantageous in general. Apart from the focus on communication channels, teachers requested that further actions should be taken by authorities to encourage immigrant parents to be involved in their children's learning activities.

7. Future research

Further investigation will be carried out with parents to gain their points of view.

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